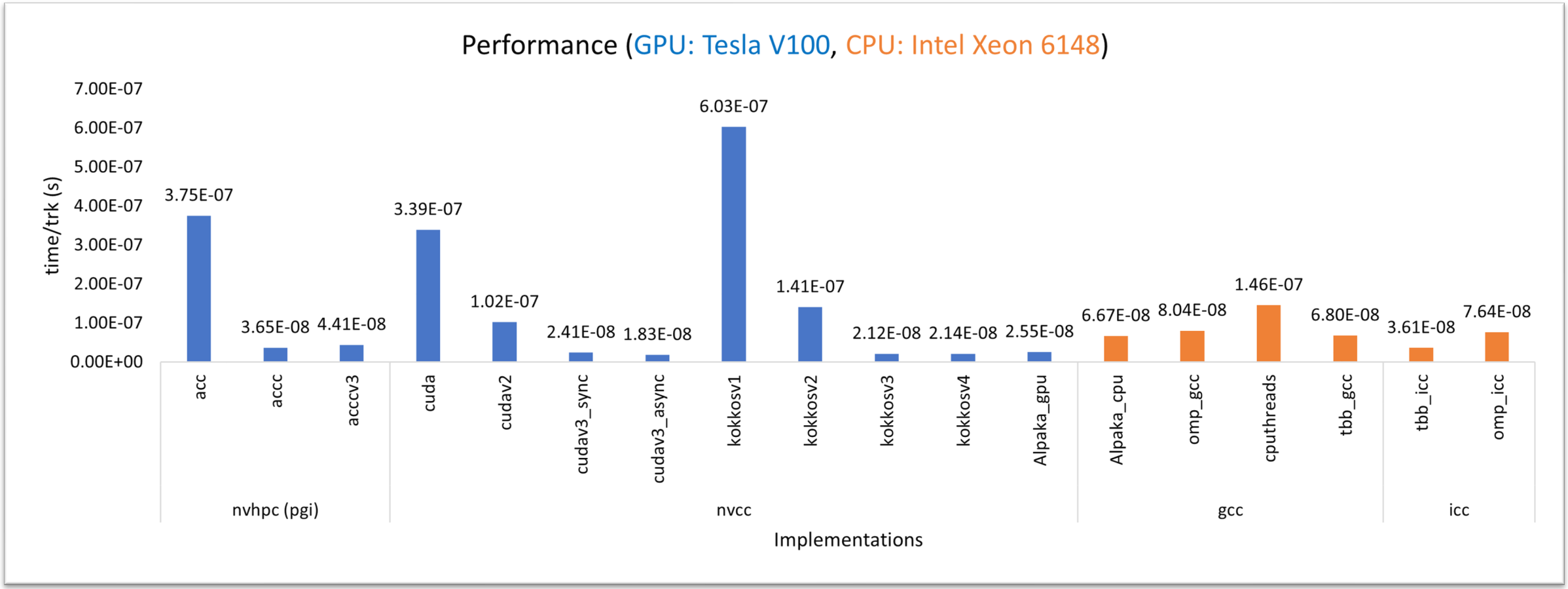
Performance Testing Results



Result Output

From alpaka GPU version with fast math optimization:

track in pos: -12.806847, -7.723825, 38.130142

track in cov: 6.29e-07, 7.53e-07, 9.63e-08

hit in pos: -20.782465 -12.241503 57.806763

produce nevts=100 ntrks=9600 smearing by=0.100000

NITER=5

done preparing!

track x avg=-20.778330 std/avg=0.100203

track y avg=-12.240009 std/avg=0.158667

track z avg=58.019833 std/avg=2.773084

track dx/x avg=-0.000149 std=0.008415

track dy/y avg=-0.000389 std=0.154646

track dz/z avg=-0.009522 std=2.157618

track pt avg=0.237291

track phi avg=-2.706547

track theta avg=0.369612

From alpaka GPU, kokkos GPU, and CUDA versions without fast math:

track in pos: -12.806847, -7.723825, 38.130142

track in cov: 6.29e-07, 7.53e-07, 9.63e-08

hit in pos: -20.782465 -12.241503 57.806763

produce nevts=100 ntrks=9600 smearing by=0.100000

NITER=5

done preparing!

track x avg=-20.778337 std/avg=0.100205

track y avg=-12.239548 std/avg=0.164175

track z avg=58.258480 std/avg=6.532563

track dx/x avg=-0.000143 std=0.012875

track dy/y avg=-0.000359 std=0.149959

track dz/z avg=-0.009359 std=2.038208

track pt avg=0.237291

track phi avg=-2.715236

track theta avg=0.364810

From alpaka CPU, and all the other CPU versions:

track in pos: -12.806847, -7.723825, 38.130142

track in cov: 6.29e-07, 7.53e-07, 9.63e-08

hit in pos: -20.782465 -12.241503 57.806763

produce nevts=100 ntrks=9600 smearing by=0.100000

NITER=5

done preparing!

track x avg=-20.778337 std/avg=0.100205

track y avg=-12.239547 std/avg=0.164191

track z avg=58.258862 std/avg=6.539643

track dx/x avg=-0.000143 std=0.012875

track dy/y avg=-0.000359 std=0.149963

track dz/z avg=-0.009359 std=2.038184

track pt avg=0.237291

track phi avg=-2.715246

track theta avg=0.364804